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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,006	12/03/2001	Jorg Henle	01-702	2143

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EXAMINER

SOLIS, ERICK R

ART UNIT PAPER NUMBER

3747

DATE MAILED: 02/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/009,006

Applicant(s)


HENLE, JORG

Examiner

Erick R Solis

Art Unit

3747



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill et al (GB 2 114 717). Hill et al disclose a throttle lever for an aircraft engine (see Fig. 7 or 8). The throttle maybe controlled by a stepper motor 31 or maybe overridable by manual movement of the lever (35). Hill et al also teach a position sensor (33). Hill et al teach at pg. 7, lines 30-50, that a change in direction of the lever is sensed by detecting a change in direction of the position encoder signal. Inherently, this position sensor acts as a force sensor, since the application of a force on the lever is necessary in order for there to be a change in direction to overcome the frictional forces of the drive mechanism. Furthermore, the applied force may also be derived from the position signal by taking a time derivative, as is well known.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 1-3,5-14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al (GB 2 114 717) in view of Senjo et al. Hill et al disclose a throttle lever for an aircraft engine (see Fig. 7 or 8). The throttle maybe controlled by a stepper motor 31 or maybe overridable by manual movement of the lever (35). Hill et al also teach a position sensor (33). Hill et al teach at pg. 7, lines 30-50, that a change in direction of the lever is sensed by detecting a change in direction of the position encoder signal. Inherently, this position sensor acts as a force sensor, since the application of a force on the lever is necessary in order for there to be a change in direction to overcome the frictional forces of the drive mechanism. Furthermore, the applied force may also be derived from the position signal by taking a time derivative, as is well known. Hill et al recite the use of a ball screw which allows the lever to move in a linear direction as the ball screw turns and vice versa. Hill et al do not disclose the use of a trapezoidal screw, as claimed by applicant. Senjo et al teach that a trapezoidal screw may be substituted for a ball screw (see col. 9, line 37). It would have been obvious to one of ordinary skill in the art to have modified Hill et al's control apparatus such that a trapezoidal threaded screw was used instead of a ball screw since both of these types of screws have low friction coefficients which would allow for ease of movement of the lever (35). The positioning of the various sensors is considered to be an obvious matter of design choice. Regarding claims 11 and 12, it is unclear if Hill et al include a drive slot, but such a modification is within the scope of one of ordinary skill in the art if not already inherent.

R sponse to Arguments

5. Applicant's arguments filed 18 December 2003 have been fully considered but they are not persuasive. In particular, applicants argues that Hill et al does not teach a force sensor, but instead teaches a position sensor. As described above, in the art rejections, Hill et al's position sensor effectively is functioning as a force sensor since by detecting a change in the direction of the position lever, it is sensing a force, since a force would be required to initiate a change in position. Furthermore, such a position sensor could also be used to derive a force by taking a 2nd order time derivative of the position, as is well known. Therefore, this argument is not found to be persuasive. Applicant also argues that the one of ordinary skill in the art would not have thought to combine the teachings of Hill et al with Senjo to substitute a trapezoidal screw for a ball screw. The examiner is not persuaded by this argument both types of screw arrangements are well known when a low friction drive is required. Senjo et al is actually being relied upon because it explicitly teaches substituting one type of drive for the other.

Conclusion

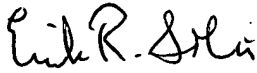
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick R Solis whose telephone number is (703) 308-2651. The examiner can normally be reached on Monday-Thursday.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


Erick R Solis
Primary Examiner
Art Unit 3747

ers
February 26, 2004